

August 2011

[KZ 4267]

Sub. Code : 4267

**THIRD B.PHARM. EXAMINATION**

**Paper I - FORMULATIVE PHARMACY AND BIOPHARMACEUTICS**

*Q.P. Code : 564267*

**Time : Three hours**

**Maximum: 100 Marks**

**Answer ALL questions.**

**I. LONG ESSAYS**

**(2 x 20 = 40)**

1. a) Preparation, evaluation and applications of nanoparticles.  
b) Physico chemical factors affecting the bio availability of drugs.
2. a) Discuss the protocols followed in the preformulation studies.  
b) Explain the bioequivalence testing procedures.

**II. SHORT NOTES**

**(8 x 5 = 40)**

1. Evaluation of microcapsules.
2. Osmotic drug delivery systems.
3. Protocol followed for the stability testing of pharmaceutical products.
4. Types of machinery employed for compression of tablets.
5. Compartmental models and its significance.
6. Film defects and its rectification.
7. Hard gelatin capsules.
8. Discuss the different types of prolonged action pharmaceuticals with suitable examples.

**III. SHORT ANSWERS**

**(10 x 2 = 20)**

1. Polymorphism.
2. Biological half life.
3. Co- acervation and phase separation.
4. Slugging.
5. Mean kinetic temperature.
7. Base absorption.
8. Racemisation.
9. Chipping and lamination.
10. Grades of gelatin used for the preparation of capsules.

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February 2012

(LA 4267)

Sub. Code: 4267

**FOURTH B.PHARM. EXAMINATION**  
**Paper I – FORMULATIVE PHARMACY AND BIOPHARMACEUTICS**

*Q.P. Code : 564267*

**Time: Three Hours**

**Maximum: 100 marks**

**Answer ALL questions**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Define Pharmacokinetics. Explain pharmacokinetics and pharmacodynamic parameters in plasma level curve.
2. Differentiate hard and soft gelatin capsules. Explain the method of manufacturing of soft gelatin capsule by rotary die process.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Processing problems of tablet dosage form.
2. Disintegration test for tablet dosage form.
3. Film coating.
4. Importance of microencapsulation in pharmacy.
5. Explain ODDS.
6. Explain Nanoparticals.
7. Explain Bioequivalency testing.
8. Write advantage and limitation of PAP'S.

**III. Short Answers:**

**(10 x 2 = 20)**

1. Define Bioavailability.
2. Define Biopharmaceutics.
3. Write size of hard gelatin capsules.
4. Classification of Liposomes.
5. Importance of tablet coating.
6. Classification of different types of tablets.
7. Write microencapsulation techniques.
8. Storage of capsule dosage forms.
9. Write chemical properties of drugs.
10. Organoleptic property.

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(LB 4267)

AUGUST 2012

Sub. Code: 4267

**FOURTH YEAR B.PHARM. EXAM**  
**Paper I – FORMULATIVE PHARMACY**  
**AND BIOPHARMACEUTICS**

*Q.P. Code : 564267*

**Time: Three Hours**

**Maximum: 100 marks**

**(180 Min) Answer ALL questions in the same order.**

**I. Elaborate on:**

**Pages Time Marks**  
**(Max.)(Max.)(Max.)**

- |  |    |    |    |
|--|----|----|----|
| 1. Discuss in detail about the physicochemical properties that affect the formulation, stability and bioavailability of drugs in dosage forms. | 19 | 33 | 20 |
| 2. Explain about the types, Formulation, defects and manufacturing of tablets in large scale production.                                       | 19 | 33 | 20 |

**II. Write notes on:**

- |   |   |   |   |
|---|---|---|---|
| 1. Evaluation of tablets.                                     | 3 | 8 | 5 |
| 2. Hard gelatin capsules.                                     | 3 | 8 | 5 |
| 3. Microencapsulation by co – acervation phase separation.    | 3 | 8 | 5 |
| 4. Techniques used in design of prolonged action dosage form. | 3 | 8 | 5 |
| 5. Method of preparation of Liposomes.                        | 3 | 8 | 5 |
| 6. Factors affecting the absorption of drug.                  | 3 | 8 | 5 |
| 7. Pharmacokinetic parameters.                                | 3 | 8 | 5 |
| 8. Methods used in coating of tablets.                        | 3 | 8 | 5 |

**III. Short Answers:**

- |                                      |   |   |   |
|--------------------------------------|---|---|---|
| 1. Name the enteric coated polymers. | 1 | 5 | 2 |
| 2. Microencapsulation.               | 1 | 5 | 2 |
| 3. Soft gelatin capsule.             | 1 | 5 | 2 |
| 4. Define Nanoparticles.             | 1 | 5 | 2 |
| 5. Dental cones.                     | 1 | 5 | 2 |
| 6. Implants.                         | 1 | 5 | 2 |
| 7. Renal clearance.                  | 1 | 5 | 2 |
| 8. Bioavailability.                  | 1 | 5 | 2 |
| 9. Spray congealing.                 | 1 | 5 | 2 |
| 10. Spinhaler.                       | 1 | 5 | 2 |

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(LC 4267)

FEBRUARY 2013

Sub. Code: 4267

**FOURTH YEAR B.PHARM. EXAM**  
**Paper I – FORMULATIVE PHARMACY**  
**AND BIOPHARMACEUTICS**

*Q.P. Code: 564267*

**Time: Three Hours**  
**(180 Min)**

**Maximum: 100 marks**

**I. Elaborate on:** **(2x20=40)**

1. Discuss about Benefits, Limitations, Types and Evaluation of Prolonged action Pharmaceuticals.
2. Explain in detail about Osmotic Drug Delivery System.

**II. Write notes on:** **(8x5=40)**

1. Physical properties in formulation.
2. Oxidation.
3. Capsule Filling.
4. Multi orifice centrifugation.
5. Tablet Excipients.
6. Advantages of Transdermal Drug Delivery System.
7. Absorption Rate constant.
8. Renal clearance.

**III. Short Answers:** **(10x2=20)**

1. Absolute Bioavailability.
2. Diluents.
3. Backing Membrane.
4. Minim per gram factor.
5. Seal coating.
6. Types of Granulation.
7. New Drug Delivery Systems.
8. Dental cones.
9. Gastric Residence Time.
10. Advantages of Tablet coating.

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(LD 4267)

AUGUST 2013

Sub. Code: 4267

**FOURTH YEAR B.PHARM. EXAM**

**PAPER I – FORMULATIVE PHARMACY AND BIOPHARMACEUTICS**

*Q.P. Code: 564267*

**Time: Three Hours**

**Maximum: 100 marks**

**I. Elaborate on:**

**(2X20=40)**

1. What are Preformulation Studies? Explain what physicochemical properties of the drugs are determined in preformulation studies and their importance.
2. Write on the different types of transdermal drug delivery systems and their evaluation.

**II. Write notes on:**

**(8X5=40)**

1. Different types of tablets
2. Quality control tests on hard gelatin capsules
3. Film forming formulations in tablet film coating
4. Design of oral sustained release products
5. Pan coating
6. Bioequivalency testing
7. Dosage form considerations in gastrointestinal absorption
8. Factors affecting stability of drug dosage forms

**III. Short Answers on:**

**(10X2=20)**

1. Components of a rotary punching machine
2. Define bioavailability
3. Diluents used in tableting
4. Storage Conditions to be maintained in standard stability testing
5. What is a fluidized bed processor?
6. What is meant by orange peel effect in tablet coating?
7. Name tablet hardness testers
8. Relationship between biological half life and elimination rate constant in IV bolus dosing following one compartment model
9. Materials required for liposome preparation
10. What is an implant?

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(LE 4267)

FEBRUARY 2014

Sub. Code: 4267

**FOURTH YEAR B.PHARM. EXAM**

**PAPER I – FORMULATIVE PHARMACY AND BIOPHARMACEUTICS**

*Q.P. Code: 564267*

**Time: Three Hours**

**Maximum: 100 marks**

**I. Elaborate on:**

**(2X20=40)**

1. Discuss about the bioavailability and bioequivalence testing.
2. Discuss about the quality control testing of tablets.

**II. Write notes on:**

**(8X5=40)**

1. Solubility
2. Chemical degradation
3. Materials for production of hard gelatin capsules
4. Spray drying – Spray congealing
5. Defects in tablets manufacturing
6. Liposome
7. Drug elimination
8. Clearance

**III. Short Answers on:**

**(10X2=20)**

1. Precompression
2. Polymorphism
3. Wetting
4. Size of hard gelatin capsules
5. Enteric coating
6. Apparent volume of distribution
7. Methods of microencapsulation
8. Hypodermic tablets
9. Biopharmaceutics
10. Application of nanoparticles

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(LF 4267)

AUGUST 2014

Sub. Code: 4267

**FOURTH YEAR B.PHARM. EXAM**  
**PAPER I – FORMULATIVE PHARMACY AND BIOPHARMACEUTICS**

*Q.P. Code: 564267*

**Time: Three Hours**

**Maximum: 100 marks**

**I. Essay:** **(2X20=40)**

1. Explain about the coating of tablets with examples.
2. Discuss about advantages, Preparation and Evaluation of Transdermal Drug Delivery System.

**II. Short notes:** **(8X5=40)**

1. Dissolution
2. Stability testing protocol for various pharmaceutical products
3. Quality control test for capsules
4. Types and importance of microencapsulation in pharmacy
5. Evaluation of prolonged action pharmaceutical.
6. Determination of bioavailability
7. Compartment models
8. Rate of drug absorption after oral administration.

**III. Short Answers:** **(10X2=20)**

1. Novel Drug Delivery System
2. Nano particles
3. Capping and Lamination
4. Osmotic drug delivery system
5. Poor flow of granules
6. Shape of soft gelatin capsules
7. Factors affecting absorption of drugs
8. Preformulation
9. Types of tablets
10. Types of tablets compression machine

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